Recording: Home Music Recording on a Small Budget

An Honors Thesis (HONR 499)

By

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Abstract:

Recording sound has been around since the late 1800s. Since then, it has evolved from its rudimentary beginning, to a more advanced analogue era, and to, now, a digital era of sound recording. Music has long been part of sound recording. Today, phones can even be used to record sound and music.

This creative project contains music that was recorded where I live, on my personal laptop, with resources that are inexpensive, especially compared to what is standard for the music production industry. The point of this is to show how technology has advanced so far that producing music is something that can be done by anybody, even if they have limited resources.

Acknowledgements:

First of all, I want to thank my professor, Stan Sollars. He has taught me a lot about the recording music the past few years. I am very thankful for his help during this project as well as his help in my collegiate career. He has helped me find something that I find very enjoyable, and for that I am truly grateful.

I would also like to thank my incredibly talented sister, Alexandria Llorens. She is currently in high school and has started to foster her love for music, singing especially. This project would have been impossible without her help. She has a beautiful voice and has is naturally gifted at anything musical. Anybody who has a talent like hers should be able to capture it, and I hope this project helped enlighten others of that.

Lastly, thank you to my parents for supporting me in this project. I did all of this from home and am lucky enough to have a room that we have named “The Music Room.” It is nothing fancy, but I am grateful that my parents support both me and my sister in what we enjoy.

Process Analysis Statement

During my audio production classes for my telecommunications degree, I learned that I really enjoy making music. I have never been that talented musically, but I learned that producing music is a different skill set and something that I would be better at because I cannot carry a tune. In class, we were lucky enough to have access to microphones used by the leading studios in the world. We have two studios that are built to be the best, acoustically, for recording sound. It is fantastic that these great resources are available to students. As I considered what my life might look like after graduation, I began to realize that it is much more likely that I will have to use my own resources rather than have access to top of the line microphones, studios, software, and more.

From the beginning, I wanted to complete a project that would be similar to something a telecommunications (TCOM) audio production class would do but do it without any of the resources a Ball State student would have. The first step was deciding which DAW I would use. DAW stands for Digital Audio Workstation. In the digital era of audio production, a DAW is a software that is used to record and mix audio. The TCOM department uses a DAW called ProTools. ProTools is a respected program in the audio industry. ProTools Standard costs $599 and comes with a year of software upgrades. I used Garageband, an application that comes free with a MacBook that I already owned. I wanted to use a resource that was affordable, and a free application seemed the way to go, even if it is inferior to an industry standard.

After doing a lot of online research, I found a sort of starter kit for music recording. On Amazon, an audio interface with a microphone, headphones, and cables goes for around $200. It can be found by searching Focusrite Scarlett 2i2 Studio (2nd Gen) USB Audio Interface and Recording Bundle. This is the most expensive part of this process, but an audio interface is

needed to record something that still has quality. The microphone that comes with this kit is nothing special, but it does the job well for a beginner. It does not compare to the resources of a studio, but it is perfect for an amateur. Equipment I used for recording music contains: a laptop/computer, a DAW such as Garageband, a microphone, an audio interface, 1/4" cables to connect instruments to the audio interface, and an XLR cable to connect the microphone to the audio interface. The interface comes with a USB cord to plug into the laptop. A stand to hold the microphone in place as well as a pop screen to put in front of the microphone to eliminate pops from fast air movement are good additions as well. Something to note is that the space in which you record needs to not reflect sound. For example, all vocals I recorded where recorded inside of a closet with clothes hung on hangers to help diffuse reflections in order to get the purest sound into the microphone.

After collecting all of the necessary tools to record, the next step is to just record. Upon opening a Garageband session, a prompt will open to select where the audio will come from for a track. When making a new track, this same prompt will open. Simply selecting the input an instrument or microphone is plugged into will allow Garageband to record from that given input from the audio interface. From there, the next step is making sure the levels of input from the instrument or microphone is loud enough but not so loud that it distorts. Hitting record and making music is the only thing left. Studios have the ability for a band to play a song with every instrument recording at once. This is not the case for the level of recording that I am describing. The Scarlett 2i2 has only two inputs, so a maximum of two tracks can be recorded simultaneously. It can still be done, but the recording process itself takes a much longer time, although it does require less people because everything can be done by a single person.

https://soundcloud.com/user-288592210-171534202/nightwemet
https://soundcloud.com/user-288592210-171534202/howgreatthouart
https://soundcloud.com/user-288592210-171534202/howgreatthouart-w-violins

Here are three songs that I recorded with the resources mentioned previously. The first one is a cover of "Night We Met" by Lord Huron. This is the most complex song and shows how well Garageband can handle multiple tracks of instruments and vocals. Each track has its own equalization and compression, but those are more advanced subjects for a beginner in music recording. What is important to know is that, like other DAWs, Garageband contains plug-ins to add effects like equalization, compression, and reverb. The reverb on this first song is evident especially in the backing vocals. I wanted to include and more complex song like this to showcase that even though Garageband is a free DAW, it can still handle basic effects.

The second song is very basic. It is an old church hymn called "How Great Thou Art." It shows how a cheap microphone and cheap software can still produce beauty. This project is not about fancy equipment. It is about creating music with the very basic of resources. The third song is the same as the second except with a downloaded plug-in of digital violins that comes with Garageband. Admittedly, the quality of these digital plug-ins is not as good as recording real instruments. However, I still think this is a very good example of another way that Garageband can be utilized when making music. It does not require any instrument. The violin parts where added after the fact by hitting certain keys on my laptop keyboard. I am not a pianist by any means, but I was still able to play along with the song and add something different without any training or outside equipment.

For this project, the songs speak for themselves. The quality of them is high enough to convince anyone that music recording does not have to happen in an expensive studio with the best microphones. It can be done from your own house for very little cost. Like a lot of things in life, the best way to start is to just jump into it. I hope this project helped encourage someone to dive into the world of music recording with the understanding that not everyone has access to professionals, but that does not have to be a roadblock. Beautiful music is all there really needs to be.